

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

VOL. XCIII. — THURSDAY, SEPTEMBER 2, 1875. — NO. 10.

IVY POISONING.

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THE frequent poisoning by ivy (*rhus*) at this season, when so many of our city residents, unfamiliar with its appearances, come in contact with it during their visits to the country and seaside, leads me to call attention to the importance of instructing the public respecting the means by which this plant may be generally and easily recognized and shunned.

Poison ivy, as it is popularly called, is not an ivy, but belongs to the sumach genus. It is *rhus toxicodendron*. It is sometimes a vine running over or by the side of stone walls, fences, and ledges, or ascending trees to a great height, and sometimes a bush of considerable size and thickness. It is found almost everywhere in New England, in many places growing in great abundance, and forming dense masses by roadsides, in pastures, and along the borders of woods. Its leaves have a marked and very characteristic glossy look, and vary greatly in shape, size, and outline. They are ternate, as the botanists say, that is, they consist of three leaflets, one terminal and two lateral, growing in common upon a rather long, semi-cylindrical stem. The leaflets are ovate with rather a broad base, more or less pointed, and their edges are either entire or notched and lobed in a great variety of forms. It blossoms in June, and the flowers are small and grow in greenish-white clusters, mostly in the axils. The berries are small, round, and also of a pale greenish-white color. Later in the season the leaves assume a great variety of most brilliant colors and attract many gatherers of autumn foliage.

Of the other dangerous species of *rhus* (*rhus venenata*), although it is far more poisonous than the above, less need be said, for it grows much less commonly than the latter. It is a small tree, as its common names ("poison dogwood," "poison sumach") suggest, and is found mostly in swamps. Its leaflets, like those of the ordinary sumach, grow upon a long stem and vary in number from seven to thirteen. They are smooth, broader than those of the latter plant, and the terminal one

grows from a considerable prolongation of the common stem. In the autumn its foliage surpasses that of all other trees in the variety and brilliancy of its tints, and thus attracts to its less frequented haunts not a few unwary visitors.

The virulent principle of these plants is a volatile acid which exists in all their parts, but especially in the leaves. All persons are not affected by it, but many who can handle the vine, *rhys toxicodendron*, with impunity are poisoned by the tree, *rhys venenata*, so much more virulent is the latter. Actual contact with the plants is not in all cases necessary for the production of their poisonous effects, on account of the volatility of their active principle; and there is good reason to believe that persons highly sensitive to the poison not unfrequently suffer from passing by places where the vine grows abundantly. The plant is supposed to be most actively virulent during the flowering season in early summer, but cases of poisoning occur with great frequency throughout the autumn, when its leaves take on their seductive coloring. Even in the winter the twigs and stems are often found still alive for mischief by those who handle them.

The peculiar effect of the poison is alike in kind upon all who are affected by it, but varies greatly in intensity. The inflammation it excites upon parts coming in contact or contiguity with it is that of an acute eczema, characterized by the eruption of vesicles of a peculiar lurid or brownish-red color, which may subsequently burst and exhibit the later phases of this efflorescence as in other acute inflammations of the skin. In addition, there is more or less of swelling and redness of the parts affected, sometimes to a very marked degree, so that great deformity may thus be produced, and the face of the patient be changed out of all recognition. These changes in the tissues of the skin are accompanied by intense itching and burning, and often great suffering is undergone by the patient in consequence. Fortunately the affection is of short duration, the acute stage lasting ordinarily but a week or ten days under treatment, and its whole course rarely exceeding three or four weeks.¹ Moreover it is not a dangerous affection, although a person severely poisoned over a large surface may present a frightful appearance to his friends. Its effects, however, are never more than skin deep. The eruption generally shows itself within three or four days after contact, sometimes within twenty-four hours. The period of incubation may, however, be prolonged to five or six days in some cases, and fresh blisters may continue to appear for two weeks or more. No danger of contagion by contact with the eruption upon another person is to be feared. The portions of the body most commonly affected are the hands and face, the parts naturally most exposed to contact, but

¹ For a more particular description of the eruption, see an article in the *New York Medical Journal* of March, 1873.

other parts handled by the former immediately after contact and before washing may have the poison thus transferred to them and be similarly affected. No scars or permanent injury to the skin or general system are to be apprehended in ordinary cases.

A few words with regard to the treatment of rhus poisoning may not be inappropriate in this connection, especially in relation to the means to be immediately used, those to which the term antidote may be properly applied. The poison, as has been stated, is a volatile acid. An alkali would therefore suggest itself as the most fit agent to counteract its action. Thorough washing of the parts, as soon as possible after contact with the poison, in cooking-soda or saleratus water, or in strong soap-suds, especially those of soft soap, which contains an excess of alkali, is therefore the best primary treatment. When these or other alkaline preparations are not to be obtained, an abundance of water alone should be used as soon as possible. After absorption has taken place, or the eruption has begun to show itself, less benefit is to be expected from such applications alone. Remedies are then to be used which will best control and shorten the inflammatory process in the tissues of the skin; those, in fact, which are found to be most efficacious in corresponding stages of acute eczema. Among these are some which have a special reputation, as solutions of acetate of lead or sulphate of copper, applied frequently as a wash. Perhaps nothing is better than common black wash used as an evaporating lotion for half an hour at a time, twice daily, the lime water acting also as a chemical antidote, if possibly such action is still in season at this later stage. In the intervals between the applications of these washes the parts may be kept covered with cold water dressings, with plasters of diachylon ointment, or with a powder of starch and oxide of zinc, according to the rules familiar to physicians for the treatment of acute eczema. By these means the process is checked and shortened, and the sufferings of the patient greatly alleviated.

In conclusion, a brief word of caution to sojourners in the country who are unacquainted with these poisonous plants. Avoid any vine or bush growing by rocks, fences, and woodsides, with glossy leaves arranged in threes, and in the autumn any particularly brilliant tree in swampy places, with leaves resembling, but broader than, those of the common sumach.

WET NURSING.

NOTES OF A LECTURE AT THE HARVARD MEDICAL SCHOOL.

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IN a former lecture,¹ certain matters were discussed pertaining to the artificial feeding of infants, and certain rules were laid down for guidance in fixing the diet of new-born children.

But we must not forget that perhaps our puerperal patient is to nurse her child. I say perhaps; for you will find a large number of American-born women who cannot nurse. What the reason is I am unable to tell you, but the fact I know. My own experience shows that American-born women in the same social position, in equally good health so far as appearance goes, equally anxious to do the mother's part, are less likely to have a sufficient supply of milk than the same number of Irish or German women. This is a subject that some of you gentlemen may study with advantage. I believe that American women are not good wet nurses. The cases of women who have no milk are rare, but I have seen a few of these. I have seen a woman, well-formed in every way, who had no disturbance of pulse, no mental disturbance, no swelling of the breasts, after an almost painless labor, with no other peculiarity than this, that with the first child there was no secretion of milk, but who nursed two children afterwards without difficulty. I have known another, who seemed equally well, who had no secretion after three labors, but whose breasts after the third labor became riddled with abscesses and fistulæ in consequence of her efforts to make a wet nurse of herself.

The question comes up before labor, Shall this woman nurse? Perhaps she belongs to a tuberculous family, all of whom have died young. She has already lost children with meningeal disease. That woman ought not to nurse her child. It is bad enough for her to have children; but if she nurses them, the chances are that her own days will be cut shorter by the act, and her children, who might be saved by proper food, are likely to fall early victims. It is bad enough, every mother would think, to take milk from a sick cow. A sick woman's milk is as bad as a sick cow's milk. The same remarks will apply to women with syphilis.

Some women cannot nurse for want of nipples. The nipples are retracted. Can you not draw them out? Sometimes you can, and nursing with a shield may be easy. In other cases, you can draw them out to a certain extent only, and it seems as if the milk ducts were bent upon themselves in such a manner as to prevent all passage of milk

¹ Boston Medical and Surgical Journal, June 3, 1875.

through them. You let this woman nurse from one side, where there may be a nipple, and milk runs out from the other. The moment you begin to draw upon the side where the deficiency is, the gland begins to fill, but no milk comes out, and the suffering becomes intense. Unless you let that particular breast alone, mammary abscess is sure to result.

If you have not seen the breasts before labor, be sure to look at them before you leave the house. The question will be asked of you, "When shall I put the baby to the breast?" Some physicians will say, "As soon as possible." If you examine the breasts carefully, you will find nipples of very different colors; some are dark and others are pale or even pink. All nipples are liable to crack, especially if not washed and dried after nursing. The darker they are, the less likely are they to crack and be sore. The lighter-colored they are, the greater is the chance of their cracking, and a pink nipple, so far as my observation goes, is sure to be sore. It cracks easily; the blood is easily drawn through the skin; the epidermis appears to be sucked off. The pain becomes intense, and the so-called "broken breast" comes on. The dark nipple may bear early suction without any trouble following it. The longer you keep the child from the pink nipple, the less suffering will result for the mother.

Many women begin months before labor to prepare the nipples for suction. This is done in two ways, so far as I know. The first is using a pump, and drawing upon the breast two or three times a day. Of course I cannot say that the breast may not be toughened by the operation, though I do not believe it. But I do believe that in some cases drawing the breasts during pregnancy has produced abortion. I am aware also that some women nurse through the whole of pregnancy without a threat of abortion. Well, a man has been under water for ten minutes without drowning; still there was danger of his death, before the first five minutes were out. The second method of preparing nipples is bathing them daily, or oftener, with borax and brandy. You would do better to oil them. The brandy dissolves the oil out from the skin and makes it more likely to crack. There is nothing in use that is more likely to cause cracking than the borax, which mixes so well with the oil of the skin as to make a sort of soap of it. I have no doubt you can find those who have been treated in this way nurse without having sore nipples; and I can find more patients who have had sore nipples from this peculiar preventive treatment. You will do better to let the nipples alone, or simply to wash them, as you would other parts of the body. Bear in mind that the lighter the color, the more likely are they to give trouble.

The question was, "When shall I put the baby to the breast?" There is a great deal said about the beneficial effect upon the child of

the colostrum, which is said to be the peculiar drug-like milk existing in the breast at the time of labor. You will sometimes find a little milk in the breast at this time, more especially if the woman has nursed before. Unless your examinations are more successful than mine have been, you will find it difficult as a rule to squeeze out colostrum or milk or anything else, for at least forty-eight hours after the completion of labor. And if you let the breasts alone until they begin to swell, you will find your patient suffer less from fever and less from pain and very much less from sore nipples. When the breasts begin to swell is the time to begin nursing with the most comfort to the woman and with the most ease to the child. Some nipples will be sore notwithstanding all the care you may take. Some women can bear the pain and some cannot. The same amount of pain hurts one woman more than it does another. In the one case the nursing may be continued. In the other, a change of food for the child must be made. Sometimes you may be able by means of a shield to take off the violence of the pain and allow nursing to go on. The variety of shields and artificial nipples is great. As a rule, the dark rubber nipples are the best, the white ones not infrequently making the child's mouth sore. The long rubber tube with a glass shield at one end and a nipple at the other is of use before the mother is able to sit up and if she have difficulty in holding the child. It is not good for continued use, being very apt to become foul, and the child and mother are both likely to go to sleep while nursing is going on, exhausting the mother and disturbing the stomach of the child. When the child goes to sleep it should always be removed from the breast; otherwise imperfect digestion is the result, as with every movement of the mother, it begins to suck, and the stomach becomes filled with milk in different stages of digestion.

Before leaving this part of the subject let me say that there are circumstances under which it is not wise to nurse a child, and temporary feeding should be considered imperative. The reception by the mother of bad news, which was totally unexpected, such as the death of one of the family; the exposure to sudden and severe fright; any very severe mental emotion; any one of these should lead the mother to have her child fed and her breasts emptied in some other way. Nursing under such circumstances has undoubtedly been followed by convulsions, even fatal convulsions, in a child previously supposed to be in perfect health.

By what I have said before, you know that I am in favor of prolonging the period of nursing. I would not have a child of my own fed, if its mother were able to nurse it, until the first sixteen teeth had cut the gum. If she were not able to nurse it, it should not be fed upon other diet than milk until the same age. People may laugh at my positive opinion upon this subject, but that will not change the

opinion, which is founded upon the most careful observation for years. Look at the death-rates and see the early age at which the great number of deaths occurs. It is true that want of clothing kills some, and that epidemic disease kills others; and accident has its share in the deaths. But the great majority of children who die fall victims in their second summer, when the changes due to teething are going on, and their stomachs, which have been taught to crave potato and cake, meat and vegetables, rebel against these and all other things, and cholera infantum and dysentery claim the victims.

Many women have very little difficulty in drying up the breasts, when necessary. Indeed, many find it difficult to furnish much of a supply after five or six months. The little that remains, however, if kept along, will be something for a sick child to fall back upon when its stomach will retain nothing else, and that little may be enough to save life. But the time comes when it is proper to wean. Let the work be begun at night, and not when a tooth is irritating; and let the abstinence be positive. Let the child nurse, if you please, on going to bed, but not again till morning. The first night will probably be one of wakefulness for both parties, if together; the better way is to separate mother and child. If the child wakes and cries, let it be soothed by the voice or by the hand, or by a drink of cold water. The chances are, that it will get very little sleep. On the second night, if the mother's courage has not failed her and she has not yielded, at least half the work will have been done. The third night, the child will probably sleep the whole time, or if not, it will be satisfied with a swallow or two of water. If the attempt is made of weaning first by day, the fatigue of the mother will be likely to make her so sleepy at night, that she will be more likely to yield to the little one's importunities, and all-night nursing will find both of them used up in the morning.

But when you begin to wean by day, it is not wise to make a very sudden change in the diet list. There is likely to be less disturbance by trying milk a few days, then perhaps broth, or bread, or cracker, or some one of the puddings which are used for children. I would not add more than one article to the diet list at a time. If you do, and indigestion follows, you are at a loss to know which produces the disturbance, and you do not know which to avoid. Indeed, two new articles will often make disturbance when neither would do so if given alone.

How are you going to dry up a pair of breasts which furnish abundance of milk? It is sometimes a painful process, whether done before a child has touched it, or after nursing for two years. But how will you do it? Simply let the breasts alone. For twenty-four or forty-eight hours the pain will be great; but long before the expiration of that time the milk will begin to drip out, and will gradually become more watery; and as soon as the demand ceases the supply will stop.

The greatest curse to a woman who is trying to get rid of her milk is the breast pump. You can stop the pain with opiates, if it be excessive. You may apply belladonna about the nipple, if you choose; this has been largely recommended. It will sometimes ease pain, but it is the letting alone that stops the secretion. If belladonna be applied, be sure to let your patient know that it is a poison, else pain may tempt the giving the nipple to the child again. The better way to relieve the pain is to give a fifteenth or a twelfth of a grain of morphia three or four times, with the interval of an hour or two; but if the breast be drawn for relief, the continuance of the pain and the risk of abscess is just so much increased. Leave a breast absolutely without touching it, and the risk of abscess or "broken breast," as it is popularly called, is at the least. I never knew of but one cat which had broken breast. The unfortunate victim had a friend who pitied her on account of her drowned little ones, drew her breasts, and gave her a mammary abscess.

A mammary abscess may come to any woman, nursing or not. It may happen in a male breast. I have seen more of them in women who have not been pregnant than I have in mothers who have stopped nursing; and when I have seen one in the latter, they have almost invariably confessed, after the monthly nurse had gone, that they had been afraid to say that the nurse had overpersuaded them to leave directions disobeyed.

How shall we treat the mammary abscess if it is coming? I do not think leeches will stop it. If there is only a hardness with pain in the gland, stop the suckling. Let what food is taken by the child be from the other breast, and let the threatened one alone. That will often be sufficient in the way of treatment. If necessary to do more, cover the breast with adhesive straps as you would a sore leg. Be sure that the straps fit it, with as few wrinkles as possible. Let them remain on till the hardness has gone, or until the matter has come to the surface, if that is to be the result. You will find the support grateful; it will keep the parts warm and soft quite as well as or better than a poultice, and it will be superior to the poultice from its less weight and its greater cleanliness. If the patient wishes it removed, you need not hurt her by tearing it off. A folded towel wrung out of warm water will take it off in an hour; or a little sweet oil or lard, rubbed over the cloth upon which it is spread, will soften it so that it can be removed without pain. Nor should you hurry about advising the knife. You may say that the pus will burrow deeper. I think you will find it discharge in more than one place, if it be deep-seated, and is first opened above the nipple or very near to it below, or if it opens in one of those places of itself. If it opens much below the level of the nipple, more especially if it be superficial, I think there will be but one opening. The nearer the pus is to the surface when an opening is made, if you prefer to make one,

the less likely is it to burrow to another spot, and the less likely is the opening to close. The best after-dressing for twenty-four hours is the wet towel, and then simple cerate or lard. You will do better not to try coaxing your patient to believe that the knife will not hurt. It will hurt, and if you find it necessary to use it, and any one says it will give no pain, simply deny the statement.

Before leaving this topic it will be as well to say a few words upon the subject of selecting a wet nurse. The simple fact of the milk being human does not make it wholesome, although many people believe that any human milk is better than any cow's milk. It is not so. Some human milk is better than some cow's milk, and some human milk, like some cow's milk, is fit for nothing. If it be decided that a wet nurse is to be employed, you may have the task of examining the numerous applicants for the place. If you know the nurse and her family history, so much the better. If you do not know her, you must be prepared for all manner of deception in her treatment of you. Of this you must not allow a hint to escape. Whatever you may suspect, your suspicions must be kept to yourself. If you examine her as a witness would be cross-examined in court, however faithful and honest she may be, she will be confused and do herself an injury. If her history be that of an unmarried woman, of itself that should not condemn her. If you can, it would be well to know about her child's father, whether she be married or not, for in either case his history may be that of a syphilitic. See the child if you can, and know that it is her child, for children are sometimes borrowed and loaned for the purpose of passing examination with. See the breasts, that they are in good condition, with dark nipples and areolæ, and, if possible, full nipples. Be sure that the milk has not been stored up for your examination. The specimen child may have been otherwise fed to keep it quietly sleeping, and the woman may have breasts which are full simply because they have not been used for twelve hours or more. How are you to find this out? Why, if you think favorably of the candidate, see her again a few hours later, and examine the breasts, when she is not expecting you.

Look at her mouth and see if she shows signs, by teeth or breath, or otherwise, of dyspeptic trouble. See if the glands about her neck and elsewhere show signs of disease. If any scars are found, look into the causes of these. A scar from a burn is of little consequence, but the remains of a scrofulous abscess should make you hesitate. If possible, her lochial discharge should have ceased. In a word, her appearance and history should be those of a woman in good health.

The age of her milk, as compared with that of the child, I think of less consequence than its other qualities. If it be very old, it is true that it is less likely to be abundant, and is likely to fail earlier. This is not absolutely certain, however, for I have known a woman to nurse

four children, one after another, and all did well. Some women will say that their milk is good because it is renewed every four weeks. By this they mean that their menstrual discharge has returned. It is simply equivalent to saying that there is constitutional disturbance once in four weeks which is sometimes the means of disturbing the child, and a loss of blood which should go to the formation of milk.

When a wet nurse first gives up her own child for a stranger, she is apt to be low-spirited, as a matter of course ; and this for a time will in some cases prevent her being of much service to the baby. It is curious, however, that the one taken to her breast very soon becomes more dear than her own, and in very many cases the death of her own child, which frequently happens as a consequence, disturbs her but very little.

How is the nurse to be fed ? Remember that she has two to eat for. If it were the mother of your calf that you were feeding, you would see that she had the food that would keep her in the best condition, and be the most likely to furnish milk of good quality. The woman is an omnivorous animal, and what she would eat with propriety when not nursing is not likely to harm her or the child. There are certain articles that seem at once to go into the milk ; some will color it ; some will give it peculiar odor ; others will affect the taste. So some medicines will affect it ; and you may make use of this fact in certain cases for treating the child. Mercurials, I believe, will sometimes affect the milk. Arsenic will go into milk. The bromides and iodides may be administered through it, and some cathartics. It is a great mistake to suppose that green vegetables are of necessity to be avoided. Some children will be disturbed if the mother eats cabbage ; and the same woman may perhaps eat green cucumbers or pickled olives without causing a pain. Vinegar is not going to pass into the milk as vinegar, and if the nurse has a fondness for lemonade, I cannot believe that it is sure to hurt either nurse or child. If you find that pain or any other trouble invariably follows the use of any article by the nurse, that particular article should be avoided by that particular nurse. The rule for you to lay down is that she shall be furnished with all the food she wants, of good quality, and at proper times. The rule for the child is that when hungry he shall have the breast ; and when he stops sucking, the nipple should be removed from his mouth, that he may properly digest one meal at a time, and that the mother may not be exhausted by the constant draught upon her nervous system.

MECHANICAL APPLIANCES IN UTERINE SURGERY.

BY WILLIAM H. BAKER, M. D., OF BOSTON.

PERSONAL observation of the injuries resulting from the improper use of mechanical appliances in many cases, and of the numerous and great benefits derived from the judicious employment of them in other cases, has suggested the theme of this paper. It is unnecessary here to dwell upon the literature of this subject, which has been fully presented by many of the recent works on gynaecology. Let us turn at once to a brief consideration of some of the causes of misplacements of the uterus. These may be classified in two general divisions: (1) those originating in the uterus itself, and (2) those external to that organ.

I. CAUSES ORIGINATING IN THE UTERUS ITSELF.

1. *Congenital Malposition.* This is usually unattended by any troublesome symptoms until the age of puberty, when, in consequence of the great stimulus which the uterus then receives, and of its development, the misplacement of the organ is proportionally augmented, and those phenomena too familiar to all practitioners to require recital begin to be manifested, and to call for special treatment.

2. *Pregnancy.* The uterus in its gravid state is necessarily subject to a series of misplacements which generally demand no particular appliance, but which may, especially in the earlier or the later months, require either an intra-vaginal or an extra-abdominal support.

3. *Subinvolution* often exists without misplacement; yet the size and weight of the organ have a tendency to produce some abnormal position, and to furnish those cases which most of the profession have either seen or been called upon to treat.

4. *Congestion* may be the primary, but is not the immediate, cause of misplacement; as occurs to a slight extent during menstruation, when, by the increased weight of the uterus, it is temporarily misplaced. Who has not observed, when malposition from some other cause previously existed, that the suffering of the patient was greatly increased at this period, not only by the existing congestion, but by the additional misplacement which it produced?

5. *Hypertrophy and Hyperplasia*, so far as our subject is concerned, produce similar results; for it is obvious that the tendency to misplacement would be as likely to follow an enlargement from a multiplicity of cells as from an increase in the size of each cell.

6. *Fluids retained in the Uterine Cavity*, like the preceding causes, may produce misplacements by augmenting the weight of the organ, and secondarily by weakening its supports, of which we shall soon speak. Or, if the gradual accumulation of fluid be not accompanied

¹ Read before the Boston Society for Medical Observation.

by a corresponding increase of the uterine tissue, it may produce such changes as to belong to our next class.

7. *Degeneration of the Uterine Tissue*, which may arise from innutrition, undue and unnatural pressure, imperfect circulation, and by the deposit or development of some abnormal element within the walls; all of these, weakening its own structure, tend to produce misplacement.

8. *Abnormal Growths*, as the various uterine tumors, are very liable to produce misplacement in ways already indicated.

II. CAUSES EXTERNAL TO THE UTERUS.

1. *Congenital Malformation of the Vagina*. In cases of undeveloped uterus, this condition is almost invariably found, and is generally attended by a diminution in the length of that canal, which may be the cause of retroversion. Or, when there is an almost entire absence of the vagina, it of course fails to give the normal support to the uterus.

2. *Excessive Abdominal Pressure*. The ordinary weight of the abdominal viscera is as much as the almost insufficient supports of the organ can safely endure. But if this weight be increased by any abdominal or pelvic growth, or by a large amount of fluid in the cavity of the abdomen, or by an accumulated weight in the viscera themselves; or if the usual weight of these viscera be thrown violently upon the uterus, as in a sudden fall, this organ may be displaced. The same result may follow a less violent or a long-continued increased pressure, as in dancing or tight lacing. Of all the causes of misplacement probably the latter is the most common.

3. *Laceration of the Perinæum*. By this, reference is made not only to those cases where the injury extends through the sphincter muscle, but also to others where any portion of the muscle or the tissues down to that muscle are involved. The loss of so important a support allows the vagina to prolapse, and this in turn brings down the uterus, which naturally follows the axis of the pelvis; precisely as when the abutment of a bridge is swept away, the whole structure must fall.

4. *Relaxed State of the Vagina*. There is a class of cases in which, though the perinæum be not torn, yet the act of parturition has caused either an atrophy and degeneration of muscular tissue, or a sundering of the union of the transverse perineal muscles to their several attachments; or there may exist a subinvolution of the vagina. All of these conditions would subsequently induce the same trouble as that just referred to. This relaxed state may also occur from a want of tone in the vaginal walls themselves, as may be sometimes seen in quite young women, and is then generally accompanied by a like condition of the rectum.

5. *Relaxed State of the Uterine Ligaments*. This is especially notice-

able in those who have had many children. The tonicities of these supports is oftentimes thereby greatly impaired; or the same condition may arise from a debilitated state of the patient from any cause.

6. *Deposit of Fluids and the Contraction of Lymph.* When the misplacement arises from an effusion of liquor sanguinis into the cellular tissue upon either side of the uterus, the misplacement will obviously occur to the opposite side, and the most pain will then usually be experienced upon the side where the effusion occurred. But subsequently the contraction of lymph may draw the uterus far over to the side where the effusion first took place, and then the pain is oftentimes most severely felt upon the opposite side, on account of the great tension of the ligaments of that side. Or lymph being thrown out about the uterus, from whatever source, in contracting may greatly displace the organ, and fix it temporarily or even permanently to some of the pelvic viscera, or to the walls of the pelvis.

7. *Cicatrices of the Vagina*, whether caused from the results of severe or protracted labors or from injuries received at other times, or, as we have sometimes noticed, from the injudicious use of caustics, all tend to draw the uterus from its normal position.

The causes above enumerated suggest the nature and kinds of misplacement of most common occurrence. The term misplacement, as here used, denotes a removal of the uterus from its normal position. It will be clearly seen that the character and extent to which this deviation takes place may be various and very great. The normal position of the uterus changes with the different periods of life. In infancy, it is high up in the pelvis or almost entirely in the abdomen, and inclines forwards. At puberty, the fundus is found just below the plane of the superior strait, with its axis a little inclined forward from that of said strait. During the period of menstrual activity, it descends slightly in the pelvis, usually following the axis of that strait. After the climacteric period, the uterus in its atrophied condition tends toward its position before puberty. Influences may arise during any of these periods which may cause a deviation from this standard. As most of the causes fall within the third of these four periods, or that when the uterus is in a state of menstrual activity, we use the term normal position to describe its place at that time, as above indicated.

The kinds of misplacement are too familiar to all practitioners to require recital in this connection.

We are now prepared to consider the principal point of this paper: Are mechanical appliances justifiable in uterine surgery? and, if so, in what cases?

On these questions the profession is somewhat divided. Some, adopting the theory that nearly all misplacements are secondary to inflamma-

tory action, seek relief for their patients by therapeutical agencies, and discard entirely mechanical appliances. Others, assuming that most uterine diseases are due primarily to misplacement, adopt the general use of such appliances. The truth, we believe, lies between these extremes; and the skill of the practitioner is best shown by the careful discrimination of cases in which they may be beneficial from those wherein they would be useless or positively injurious. This will be evident, if we consider, first, what is to be understood by mechanical appliances; and, secondly, when they are desirable and when objectionable.

Mechanical appliances, as here understood, are designed to assist in the support and maintenance of those organs and parts of the body contemplated in uterine surgery.

These are frequently classified according to the purpose which they are intended to subserve. But a more natural and simple division is according to the place to which they are applied. Thus we may have (1) those partially or entirely external to the body; (2) those which are intra-vaginal; and (3) those which are intra-uterine. Under this general division the various purposes of these instruments will naturally form subdivisions. Thus, under the first of these classes we have the various abdominal supports and all the different forms of pessaries which, being partially internal, yet have an external point of attachment. Under the second we have all those pessaries which take their bearing upon the symphysis pubis, under the pubic arch, or upon the vaginal walls. And under the third we have all the various forms of stem pessaries.

Were it possible to collect all the instruments that have been constructed and used in this department of surgery, they would of themselves form a large museum; and it would puzzle the most intelligent physician to determine the design and use of many of them. Some abdominal supports are very ancient, and still prove highly beneficial. Among the best now in use are the elastic and the London supporters, although a very efficient one is often made from simple cloth. Those having an external point of attachment, while they are applied internally, are usually constructed of hard rubber or some metallic substance, and should be avoided in every case where an intra-vaginal instrument can be made to accomplish the result, lest from the motion of the body, as in walking, they produce excoriations, and thus become a source of great annoyance to the patient. As the dental surgeon must have an exact impression of the mouth to which he is to fit a set of teeth, so the uterine surgeon must adapt the appliance to the individual subject. Therefore it is often desirable first to construct a model of some ductile material, as block tin, which is readily adjusted to the particular case; and, this being done, the instrument can be duplicated from some more

substantial and inflexible material. This law of adaptation must not be departed from, whether the pessary be constructed upon the plan of Hodge, Hurd, Hoffman, or others too numerous to be named, or of any modification of their inventions. That of Hodge, acting upon the principle of the lever, is generally preferred, being applicable to the greatest number of cases. The intra-uterine appliances are less various, and should be used with the greatest caution, on account of their liability to induce inflammatory action. For this reason certain practitioners entirely discard them, while others find them decidedly beneficial in certain cases. These may be so constructed as to secure slight galvanic action; or they may be made with a greater or less curvature, or even straight, according to the degree of flexion they are intended to overcome, or other purposes which they are designed to fulfill.

In the second part of this article we propose to show, by the report of cases, wherein any of these appliances may be beneficial, when they may be dispensed with, and when they are positively injurious.

(To be concluded.)

RECENT PROGRESS IN ANATOMY.

BY THOMAS DWIGHT, JR., M. D.

METHODS.

MR. LAWSON TAIT has lately published an article¹ containing the results of his experience in preparing sections for microscopical examination. He strongly advocates freezing the specimen, on the ground that it is thus presented in a more nearly normal condition than after treatment with reagents. It is hardly necessary to discuss his method of freezing, as doubtless many others are equally efficacious; but he gives a good hint as to the manner of getting rid of the minute air-bubbles which form in thousands on the thawing of the section. The remedy lies in the application of a few drops of boiled water, which, owing to its affinity for air, soon clears the specimen. The most valuable part of the paper consists of suggestions for staining; but we must be permitted to intimate that, like most original observers, our author hardly does justice to the methods of others. Thus gold is dismissed with the following words, in a foot-note: "Gold stains so irregularly as to be useless," which is in contradiction to the opinion of the best authorities. No doubt, even in experienced hands, gold not uncommonly fails to produce the desired results, and perhaps occasionally misleads by irregular action; but on the other hand there is nothing to take its place for the demonstration of the finest nerve filaments. In the same foot-

¹ *Journal of Anatomy and Physiology*, May, 1875.

note Mr. Tait confirms Alferow's¹ praise of the silver lactate for marking intercellular divisions. Mr. Tait divides staining fluids into those which discriminate between different elements and those which color all (except fat) alike. Among the latter he, with some slight reservation, classes carmine, except for hardened tissues. He holds that the criterion of the value of a staining fluid is the readiness with which its working is affected by the presence of an acid or an alkali. He considers litmus and red cabbage the best staining agents, but states that they are difficult to work with. As hæmatoxylin is deservedly popular and well recommended by Mr. Tait, we give two of his methods of preparing it. Taking the ordinary extract of logwood, as sold by druggists, he "made a strong watery solution with the aid of heat, filtered it, and added to it when cold about ten per cent. of pure spirit, or a drop of oil of cloves, to make it keep. A few drops of this poured on to a fresh section will stain it a pale brown in a few minutes, and the addition of a few drops of a four per cent.² solution of nitric acid in distilled water will display the nuclei of a faint brown color, while the rest of the tissue becomes cherry-red." Another method is as follows: "Place a little distilled water in a watch-glass, and float on its surface about half a grain of the feathery crystals of hæmatoxylin, then add a very small quantity of strong ammonia on the point of a thin glass rod, and stir till a brilliant purple solution is formed. In this immerse the section till it is of a deep lilac color, and wash it. It will then be found that while the tissue is lilac, the nuclei are a deep purple. The stain will be found to disappear as the ammonia evaporates; but it may be completely fixed by placing the section for a few minutes in a saturated solution of alum."

From these and other reactions the author holds, contrary to the general opinion, that the nucleus is faintly more alkaline than the body of the cell. He uses glycerine jelly for mounting.

CONJOINED EPITHELIUM.

Under this heading Dr. S. Martyn³ calls attention to some original views on cells known as "prickle and ridge cells," to be found in the deeper parts of the skin and of some mucous membranes. They were first described some twelve years ago by Max Schultze, and, as Dr. Martyn observes, have attracted but little notice in English works. The surfaces are more or less covered by ridges and by projections (prickles), which are best seen at the edges. These are figured as sharp triangular spines which interlock with those of neighboring cells as the bristles of two brushes that are put together. The author is inclined to con-

¹ Vide last Report on Anatomy in the JOURNAL, March 4, 1875.

² In the text this is written, ".004 per cent.," but other passages leave us in little doubt that four per cent. is meant.

³ British Medical Journal, June 26, 1875.

sider the classical picture that of a secondary appearance, and to hold that the prickles are broken-off bands that once joined distinct cells. In support of this he describes and figures specimens in which bands could be traced without interruption from the substance of one cell into that of another, while the free side of the cell was covered with prickles. The author is not so clear as to the origin of the "ridges," but suggests, if we understand him correctly, that they are simply longer stretched bands that are broken and lying on the surface of the cell. As to the formation of these appearances the author thinks that "the cells of the rete mucosum, in multiplying originally by subdivision, retain numerous points of incomplete severance, and these points of adhesion are dragged out and become the uniting bands." Although, as Dr. Martyn himself states, these cells are found in normal tissues and in lower animals, he surprises us by assuming, toward the end of his paper, that their presence indicates "an abnormal functional activity of the lower cells of the rete mucosum."

NERVOUS SYSTEM.

Digital Nerves. — Curious phenomena of unexpected absence or persistence of sensation in certain parts of the hand, after injury of some of the nerves supplying it, have given rise at times to a good deal of confusion, as the usual descriptions of the distribution of these nerves could not easily be reconciled with the symptoms. Dr. L. G. Richelot¹ has made some dissections that give much information that cannot be obtained except in Henle's Anatomy, with the last part of which the author was not acquainted till he had nearly finished his investigations.

In some points his description appears more accurate even than Henle's, though usually they agree. The method of examination consisted in removing the skin and nerves together, and in then dissecting the latter from the inside, thus preserving the cutaneous filaments that otherwise are lost. The index, middle, and ring fingers are supplied as follows: the palmar nerves (to wit, from the ulnar for the inner side of the fourth finger and from the median for the others) divide near the root of the fingers into two branches of nearly equal size. The anterior of these are the palmar collateral nerves, and run as usually described along the sides of the fingers, and finally give off the subungual branches that go to the back of the fingers at the root of the nails. The other branches of the palmar nerves pass at once to the back of the fingers, and reaching the skin at the beginning of the second phalanx supply the back of the fingers below that point. The dorsal nerves going to these three fingers from the back of the hand are in no sense collateral branches, but end in the skin over the first phalanx; the fore finger and one side of the middle finger are supplied by the radial, and

¹ Archives de Physiologie, No. 2, 1875.

the rest of the middle and both sides of the ring finger by the dorsal branch of the ulnar. The thumb and little finger present a different arrangement; here we have true dorsal collateral branches from the dorsal nerves, and the posterior divisions of the palmar ones are of very little importance. Thus it appears that the dorsal surface of the two lower phalanges of the three middle fingers is supplied by branches of the palmar nerves, and that owing to the distribution of the latter the median has a greater share in the innervation of the back of the hand than is usually ascribed to it.

The Great Splanchnic Ganglion forms the subject of a paper by Mr. D. J. Cunningham,¹ who has given much attention to this little-known swelling of the splanchnic nerve. It has not, however, been quite so much overlooked as would be inferred from the writer's remarks: "By those authors who take notice of this ganglion, it is described as of rare occurrence, and few enter into any particulars as to its anatomy." Sappey says that it occurs "*assez souvent*," and Cruveilhier that it is not rare. Nevertheless, Mr. Cunningham has added decidedly to our knowledge of the subject. He has made special dissections for this ganglion eleven times on the right side, finding it in all, and fifteen on the left, finding it in nine; in other words, he found it twenty times out of twenty-six. It is situated at the point at which the great splanchnic nerve receives its last root, and lies on the twelfth dorsal vertebra or on the cartilage between it and the eleventh. In size it varies from that of a pin's head to that of an orange seed. It gives off from five to nine branches, which form a net-work about the junction of the thoracic and abdominal divisions of the aorta, and occasionally join the large neighboring plexuses of the sympathetic. The author has never been able to find a direct communication, such as Rüdinger describes, between the ganglia of the two sides of the body.

Nerves of the Dura Mater. — The manner of termination of these nerves has never been definitely settled, although Von Luschka in his monograph declares that all of them end in the vessels and none in the membrane itself. Dr. W. T. Alexander² has studied this question in the lower animals, examining both the cranial and the spinal membrane, and coloring the nerves with the gold and sodium chloride. He finds that a large number of nerves follow the vessels, forming plexuses around them and ultimately entering their coats, and that others end in a net-work in the substance of the dura mater. He has not been able to discover how either set of fibres actually terminates.

(To be concluded.)

¹ *Journal of Anatomy and Physiology*, May, 1875.

² *Archiv für microscopische Anatomie*, Band xi. heft 2.

THE ETHER CONTROVERSY.

THE occurrence of two deaths from chloroform in London under circumstances somewhat more startling than usual has led Mr. George Pollock, of St. George's Hospital, to write a letter to the *London Times* for the purpose of calling the attention of the public to the great difference existing in the relative safety of ether and chloroform, which, he points out, has already been shown repeatedly in the medical journals. In concluding he adds:—

“I ought, perhaps, to apologize for intruding a professional question on a non-professional journal; but one must employ a big hammer to drive a large nail through a thick piece of wood. We have some very thick pieces of wood to deal with. The question has been brought forward in the leading medical journals of the day; and yet within one week we read of the loss of two lives, which, I say it with regret, might not have occurred had ether been employed in place of chloroform. I therefore seek the aid of your great influence to bring to the mind of the public, as well as the profession generally, the importance of a correct knowledge on this subject.

“It is a big subject. It is a question between living or dying. If our judges, coroners, and magistrates, if the members of the bar and the public, were once satisfied of the danger of the one and the safety of the other, I need not pause to inquire what may be the position of that man who is hereafter unfortunate enough to lose a patient under the influence of chloroform.”

This has been the starting-point of quite an extended discussion in the English journals, in the course of which so many curious statements have been made, that, although there is little to be added to what has already been written in the columns of this journal on the subject, we hardly feel inclined to pass them by without some criticism. The *Lancet*, in quite extended comments upon the subject, endeavors to convey the impression that the supporters of ether claim for it absolute safety; and having refused this assumption adds:—

“It follows, then, that the absolute safety of ether is not proved, and though we incline to think that it is safer than chloroform, the wish that it is may, after all, be the parent of the belief;” and further on says, “We deal, therefore, with no more than a general impression when we say that ether is safer than chloroform.” In support of this position it quotes cases of death under ether, particularly those lately reported in the English journals, and points also to the well-worn argument of the far greater use of chloroform up to the present time accounting for the greater number of deaths by that agent, while the question of the existence of a poison peculiar to chloroform, which kills suddenly and under the most favorable circumstances, is ignored.

In regard to the absolute safety of ether, no one can doubt that ether can be made to kill, as Mr. Pollock, following the example of other defenders of this agent, has admitted. We must protest, however, against the character of the testimony which goes to show that the frequency of death from ether is such as to throw even the shadow of a doubt over the comparative safety of the two agents. Such insinuations as have been made by our conservative friends help to show the weakness of their cause. The so-called deaths from

ether referred to include a death from blood in the trachea, and deaths from the use of an impure article, namely, the ether used for producing spray in local anæsthesia. To make ether responsible for the blunders of English surgery can hardly be considered a fair way of sustaining the prestige of chloroform. The *Lancet* says further that ether must have "twenty-five years of trial in every respect equal to that which has been given to chloroform," to test its safety. In reply to this we can but refer our contemporaries to the fact that chloroform acquired the reputation it now has long before it had been put to the ordeal which ether has sustained. For instance, the late Dr. John C. Warren wrote in 1849 of chloroform, "We were soon awakened from our dreams of the delightful influence of the new agent, by the occurrence of unfortunate and painful consequences, which had not followed in this country in the practice of etherization." The great danger of chloroform was fully recognized even at that early day.

We cannot refrain here from quoting a paragraph from the remarks of the *Medical Press and Circular* on this discussion:—

"To suddenly put aside chloroform in favor of ether, as Mr. Pollock would have us do, would be to acknowledge that for forty years we have not only made no progress in the study of anæsthetics, but that for some reason or other, not suggested, we have willfully or blindly discarded a perfectly safe and efficient anæsthetic for the use of a dangerous one."

The *Lancet* also indulges in a somewhat similar strain. We trust such reflections as these may indicate that our more conservative British colleagues are beginning to realize the position in which they have placed themselves. Should prejudice still blind them, however, we have strong hopes from the revivalists represented by such men as Mr. Pollock and many other prominent English surgeons, who have received valuable support from the *British Medical Journal*.

In conclusion, we would simply caution our friends against the use of an impure article. Avoid everything but pure ether, such as is obtained in this country from Squibb, or Powers and Weightman; follow the simple directions laid down by Dr. H. J. Bigelow in an article in the *JOURNAL* of November 20, 1873, which appeared shortly afterwards in the *British Medical Journal*, and such cases as have appeared in late numbers of the English journals will cease to be reported. Give ether simply a fair chance, and the most stubborn and ignorant of its opponents will surely be obliged to acknowledge its superiority.

THE BRIGHTON SLAUGHTER-HOUSES.

THANKS to the perseverance and energy of the State Board of Health, the numerous nuisances which have for years existed in the Brighton district of the city, in the shape of slaughter-houses, have gradually disappeared until scarcely half a dozen remain. The business heretofore done, oftentimes in a very questionable manner, at various localities in that section of the city has

been almost entirely transferred to the lands belonging to the Butchers' Slaughtering and Melting Association, and is now carried on under the immediate supervision of the managers of that association.

Early in the summer a petition was received by the State Board of Health asking that action be taken against those few who still continued the business outside the abattoir, in places utterly unsuitable for the purpose. A public hearing was given, at which both complainants and defendants appeared, and after a full and thorough investigation of the subject, four of the offending parties were ordered to cease and desist. To this order of the board no attention was paid, and accordingly an injunction was issued, August 6th, by the Supreme Court at the request of the attorney-general. Three of the parties ceased from further violation of the orders of the board. One, however, Henry Zoller, continued as before, in defiance of the injunction of the Supreme Court. Accordingly an order was issued August 20th, ordering Mr. Zoller to appear and show cause why he should not be proceeded against for contempt of court. The hearing was held August 24th.

The defense claimed that he had not slaughtered since July 1st, which was the date at which he was ordered to cease and desist. He stated that a few days before, he had sold out his teams to his brother, Christopher Zoller, and that his wife, who owned the premises, had leased them to this same brother, who had since been carrying on the business. He contended that the injunction was against him personally, but the Board of Health showed that Christopher Zoller had been present at the hearing before the Board of Health, and knew of the passage of the order to cease and desist.

The court (Judge Colt) decided that the sale to the brother was a mere ruse to avoid the effect of the process, and an attempt to evade the same. The method adopted was a legitimate legal dodge to avoid the difficulty. The attorney-general having stated that the Board of Health did not desire the defendant punished, but merely that its orders should be obeyed, the court ordered that the defendant should pay the costs of the legal proceedings in the case, and should be allowed one week in which to close up his business.

The Board of Health are to be congratulated that their action was so promptly sustained by the presiding judge of the Supreme Court, who was unwilling to see an official order of the board set aside by a mere legal quibble. It is to be hoped that the members of the board will be equally successful in the future in their attempts to properly carry out such orders as they shall consider necessary for the preservation of the health and sanitary welfare of the commonwealth.

MEDICAL NOTES.

— We are requested to state that the rooms of the Boston Medical Library Association are on the ground floor, and not below ground, as some have interpreted the "basement" mentioned in the circular which lately appeared. They are in Hamilton Place, quite accessible and attractive, and will be opened early in the fall.

— Dr. C. Irving Fisher having resigned the position of Port Physician of Boston, the Board of Health, Mayor Cobb concurring, have appointed Dr. Alonzo S. Wallace as his successor.

— A case of penetrating pistol-shot wound of the abdomen, the bullet passing per rectum on the fourth day, and the injury followed by rapid recovery, is reported by Dr. Wm. O'Meagher in the *Medical Record* of July 17, 1875. April 25, an able-bodied laborer was shot while under the influence of liquor by one of his companions. Examination showed that the bullet had penetrated and lodged in the abdominal cavity, having entered at the right upper angle of the umbilical region, corresponding with a portion of the transverse colon, the duodenum, and possibly with the greater curvature of the stomach distended with a hearty meal and fermented liquor. Without delay — no attempts having been made to find the bullet — the wound was cleaned and covered with a cold water dressing and oiled silk. The patient vomited freely, but neither blood nor bullet could be detected in the vomitus. Opiates, ice, etc., were administered, and absolute rest on the back, with the knees flexed, was enjoined. After a tolerably comfortable night, the next day symptoms of peritonitis set in. On the third day the patient was better. On the fourth day, notwithstanding the free use of opiates, there continued as on the previous day a desire to evacuate the bowels, and after a dose of castor-oil a bullet was found in one of the dejections. Recovery was uninterrupted by any untoward symptom. In nine days the wound was entirely healed. The bullet, a part of a patent cartridge, weighed only forty grains. Dr. O'Meagher attributes the favorable termination of the case to the following conditions: the smallness of the missile, the early closure of the wound, the entire absence of attempts to find the bullet by probing, abstinence from food and drink except in small quantities, absolute rest, and a good constitution. The reporter finds but few similar cases on record — two by Hennen and one by McLeod.

— We have to report another case of sudden death following thoracentesis, this time reported by M. Legroux to the Société Médicale des Hôpitaux. A man fifty-two years old, fifteen days after an undiscovered fracture of the ribs was deemed by M. Legroux to demand thoracentesis on account of an excessive pleuritic effusion of the left side, causing dyspnoea, cyanosis, and displacement of the heart to the right. The operation was performed by the aspirator under ordinarily favorable conditions. Two thousand grammes of slightly reddish, turbid fluid were drawn off. Forthwith the patient was considerably relieved. He had for a quarter of an hour the teasing cough which commonly follows the operation, but no expectoration of note. Three quarters of an hour later, when he was feeling much relieved, and was talking with his companions, he suddenly cried out, "I feel faint!" He was seen to lie down on his bed, to make two or three movements of his arms, to become pale, and then was dead. The post mortem discovered no lesion sufficient to explain the cause of death. There was no vascular obstruction, no congestion or apoplexy of the lungs, no cerebral lesion. M. Legroux was disposed to consider syncope the cause of death — a syncope resulting from cerebral anæmia. Such an anæmia might result from the afflux of too great a quantity of blood into the liberated lung, and from the diminution of the quantity of blood circulating in the cerebral vessels.

— Dr. Labarthe sends to *Le Mouvement Médicale* a copy of his letter to the prefect of police in which he sets forth the reasons which induced him to resign the office of assistant physician to the dispensary de Salubrité, of Paris. Dr. Labarthe objected to the regulation requiring the physician to visit the houses of prostitution at midday. Such a procedure is liable to subject the physician to insults, and to cause him to be accounted a shameless debauchee. It was very desirable that some public guardian of the peace should accompany the physician in these visits, but this was not granted. A very simple plan would have been to have had an appointed place in each of the twelve sections of Paris where the prostitutes could come for examination, but such a plan did not approve itself to the administration. Dr. Labarthe complains that he was disappointed in his expectation that to himself, who had devoted his time exclusively to the study of venereal diseases, the dispensary would furnish a vast field for study, researches, and observations upon these diseases. He states that the physicians had no voice in the management of the affairs of the institution, and instead of seeing the medical corps a sort of permanent commission occupied in the consideration of questions of the most important social interest, namely, the statistics and prophylaxis of venereal diseases, the organization of prostitution, and finally the extinction of these maladies, he found nothing but the consideration of self-interest and silence regarding these important questions.

— In our foreign exchanges we learn of a case of poisoning of an infant by opium administered to the mother. The latter was about to undergo an operation, and at ten o'clock in the morning she took twenty-five drops of Battley's sedative solution, and repeated the dose at two o'clock. At eight o'clock in the evening she took five centigrammes of opium in a pill.

Her child, a strong boy seven weeks old, was restless throughout the day. At midnight he took the breast and suddenly fell into a deep sleep, in which he remained for six hours. On awaking he sucked a little, and again slept throughout the day. At two P. M. respiration diminished in frequency, and became less deep, and jerking. At six P. M. the pupil was contracted, respiration imperfect, jerking irregular, but in frequency nearly normal. It was with great difficulty that he could be aroused. Coffee was administered by the mouth and by the rectum, and the patient was exposed to the draught from an open window, and in about an hour he seemed better. An hour later respiration ceased for a while, and he appeared dead; life, however, returned, and the following day, by two A. M., he was out of danger.

The two points to be noticed in the case were the duration of the symptoms (twenty-six hours), and the fact that the mother's milk served as a vehicle to the poison.

A second case is referred to, in which an infant some months of age, suffering from diarrhoea, was ordered one drop of laudanum every three hours. After the first drop the diarrhoea ceased, after the second convulsions came on, and after the third the child died.

Both cases are instructive, as showing the susceptibility of infants to opium. But the fact is very well known, and practitioners are, or ought to be, on their guard in administering opium to children or to a suckling woman.

— Through the courtesy of the Signal Service Bureau of the War Department, we have received the first number of a bulletin containing an international exchange of weather reports. There could be no more significant illustration of the recent rapid advances in meteorological science than this record of observations taken simultaneously at numerous stations throughout the great northern hemisphere. Algeria, Austria, Belgium, Sweden, Switzerland, Turkey, Great Britain, France, Germany, Italy, Canada, and the United States here contribute a uniform system of weather records, comprising data of barometric pressure, temperature, humidity, wind-movements, clouds, and rain-fall. These observations will in future permit the study of atmospheric changes the world over, enabling storms and other disturbances to be traced from their origin throughout their course until they disappear. It is a source of national pride that our own government observers, of whom General Myer is the chief officer, have put the work into practical operation and established the form which we have before us.

We indulge the sanguine hope that the system of meteorological observations above described may presently point the way to a similar scheme applied to the record of epidemic movements and prevalent diseases. It is not too much to expect that sometime we may have an international bulletin setting forth officially the movements of "waves" of epidemic disease from their initiation to their decline, medical "signal officers" becoming the counterpart of the weather observers. The practical advantages of such a general system in its relation to the public health are obvious; while the obstacles in the way of its accomplishment are not more insurmountable than were those that seemed a few years ago to stand in the way of the present admirably managed signal service at Washington.

LETTER FROM NEW YORK.

MESSRS. EDITORS,— In looking over the reports of the mortality from diarrhoeal disease among children during the past few weeks, it occurred to me that an account of the prevalence of cholera infantum and similar troubles might prove of interest to some of your readers. I therefore propose to devote a considerable portion of this letter to such facts as I have been able to gather on the rate of mortality, in this year and former ones, from diarrhoeal diseases among children under five years of age. It is almost impossible to keep a city of the size of New York, and populated with the class that one finds in its thickly-settled portions, in a good or even a fair sanitary condition. When it is remembered how large a portion of the population of the city is crowded together in spaces barely sufficient to properly accommodate one fifth of their number, the wonder is that the rate of mortality is so low.

A walk through any of those parts of the city inhabited by the lower class, and reeking with the stench from garbage which they persist in throwing into the street, added to the close, stifling smell coming from houses and cellars full of filth, and swarming with dirty, half-clad children, will demonstrate the

chief predisposing cause of infantile mortality. As the mean temperature approaches 70° Fahrenheit, the weekly reports of mortality show an increase in the number of deaths among children, and as the temperature exceeds that degree the death-rate among the above-mentioned class rapidly increases. As a rule this mortality begins to increase about the third or fourth week in June, by the middle or last part of July reaches its maximum, continues high during August, and gradually diminishes during the early and middle parts of September, and by the end of that month does not much exceed that of the early portion of June.

The board of health have recently published, in the *City Record* for August 3d, a table very instructive to any one interested in this subject, from which the accompanying table is copied.

SUMMER MORTALITY-RATES IN NEW YORK CITY.—SIX YEARS.

	1870.				1871.				1872.			
	Total Mortality from all Causes.	Diarrhoeal Diseases under 5 years.	Mean Temperature.	Mean Humidity.	Total Mortality from all Causes.	Diarrhoeal Diseases under 5 years.	Mean Temperature.	Mean Humidity.	Total Mortality from all Causes.	Diarrhoeal Diseases under 5 years.	Mean Temperature.	Mean Humidity.
June	1771	208	71.43	64.57	1939	2831	70.04	60.52	2432	289	69.68	66.64
July	3343	1185	77.75	59.	2847	1031	73.02	60.31	4314	1768	79.31	80.99
August	2941	1009	77.62	55.33	2384	738	74.48	64.32	2902	948	73.65	69.74
September	2074	477	71.19	51.95	2182	217	69.73	66.29	2568	683	71.67	74.28
	1873.				1874.				1875.			
	Total Mortality from all Causes.	Diarrhoeal Diseases under 5 years.	Mean Temperature.	Mean Humidity.	Total Mortality from all Causes.	Diarrhoeal Diseases under 5 years.	Mean Temperature.	Mean Humidity.	Total Mortality from all Causes.	Diarrhoeal Diseases under 5 years.	Mean Temperature.	Mean Humidity.
June	1912	124	70.80	64.10	1873	81	66.42	64.50	1967	78	66.57	66.25
July	2737	922	72.72	65.83	2392	602	74.25	61.75	2847	708	75.1	71.
August	3138	1152	75.77	63.75	3021	1106	72.55	60.75	-	-	-	-
September	2457	575	69.35	69.75	2474	645	70.2	55.	-	-	-	-

The statistics of the board of health above mentioned give the total mortality, the mortality from diarrhoeal disease of children under five years of age, and of persons of more than five years of age, the greatest range of temperature, the mean range of temperature, and the humidity in each week from January, 1867, to the first week in August, 1875. In the accompanying table saturation is taken at 100. I will refer to the table since 1870, and only then, for the months of June, July, August, and September.

We find on referring to the table that the years 1870, 1872, and 1873 show the greatest infantile mortality during the summer months; and of these years the greatest number of deaths among children from diarrhoeal disease occurred in 1872, the mean temperature being the highest for that year.

The following is the greatest mortality occurring in any one week of each summer:—

1870, 4th week in July, mortality	379.	Mean temperature	82.31°
1871, 3d " " " "	393.	" "	79.48°
1872, 2d " " " "	618.	" "	83.97°
1873, 4th " " " "	418.	" "	72.70°
1874, 4th " " " "	358.	" "	75.90°

The excess of infantile mortality in 1873, with a mean temperature of 72.70°, over 1874, with a mean temperature of 75.90°, does not seem to be accounted for by anything in the table. This year the last week in July shows the greatest number of deaths, being three hundred and seventy-eight, with a mean temperature of 74.50°. The heavy rains for the past few weeks have done much to clean and purify the city, and unless we should have another great increase in the temperature, the mortality from infantile diarrhoea will probably be comparatively low. Thus far we have had a less number of deaths this year than in any previous one except last, and it is probable that from this time on there will be rather a diminution than an increase in the death-rate among children.

In writing about children perhaps I ought to say something of the "Floating Hospital of St. John's Guild," concerning which so much has been written in the daily papers. About eight years ago there was organized in connection with St. John's Church, belonging to the corporation of Trinity Parish, an association called "St. John's Guild," its object being to aid the poor in the lower portion of the city. Three years ago it ceased its connection with St. John's Church, and became an independent organization. In 1873 an attempt was made to collect a fund to be called "The Destitute Sick Children's Relief Fund." With the money thus collected a large barge and steam-tug were chartered, an abundant supply of proper food was placed on board, and two trips were made on the bay, carrying a full load of children and their mothers. This seemed to be so popular, and funds came in so freely, that last year they were able to provide eighteen excursions on the waters about New York. Upon these trips 15,202 children and their mothers were taken, at an expense of \$5193. Last fall the hull of a steamboat was purchased and fitted up as a barge; and this is the "Floating Hospital of St. John's Guild." I think that it is a misnomer, as it conveys a wrong impression of its use. This barge is two hundred and ten feet long, and thirty-six feet wide at its widest part; it has an upper and a lower deck, the latter so arranged that it can be made comfortable in case of a storm, by means of shutters. The upper deck is under cover, and has curtains at the sides, so as to protect the children from the sun. The space below deck, corresponding to the lower cabin of a steamboat, is divided into two rooms; the smaller one, forward, is fitted up as a kitchen; the other is the dining-room, having two rows of tables running its whole length, and capable of seating about six hundred children. On the main deck forward, separated by a passage-way running fore and aft, are two small rooms, containing seven little beds each, for those children who are too sick to be up. They are well ventilated, but I understand that they are not used much. Back of these wards is an open space, broken only by two wide staircases leading to the upper deck. Pretty well aft are several rooms, one for the superintendent, and the ladies who may wish to go on these ex-

cursions ; back of this is the doctor's room, who goes on the trip, and who is expected to provide medicine for those who may require any. Behind this are the water-closets. The upper deck is entirely free of any obstruction, and the children and their mothers are kept up there, and not allowed on the lower deck. The barge is propelled by a tug-boat. Excursions are made on Tuesdays, Thursdays, and Saturdays of each week. The barge leaves the foot of Twenty-Third Street and East River at eight o'clock, stops at Market Street at nine o'clock, then at West Tenth Street and at West Thirty-Fourth Street and North River, taking on at these places as many as apply. The excursionists are provided with a breakfast and dinner. They usually take from nine hundred to fifteen hundred children and mothers on each trip. To provide for so many mouths they use six hundred pounds of beef, eighty gallons of soup, three hundred and fifty loaves of bread, three hundred and fifty quarts of milk, one barrel of hominy, three fourths of a barrel of sugar, one third of a chest of tea, and one tub of butter.

The total cost of the barge was \$20,000, and the expense of each excursion is about \$200.

Every physician in the city has been furnished with cards like the following : —

FLOATING HOSPITAL OF ST. JOHN'S GUILD.	
FREE EXCURSIONS	
FOR DESTITUTE SICK CHILDREN AND THEIR MOTHERS.	
<i>Every Tuesday, Thursday, & Saturday.</i>	
Pass	_____
Residence	_____
Sent by	_____ M. D.
<i>Under the Supervision of REV. ALVAH WISWALL,</i>	
<i>Master of St. John's Guild.</i>	

These cards are distributed as opportunity offers. On these excursions they are not able to go more than twenty miles from the city, their object being to give their voyagers fresh air. The children who go on these trips are of course from the lowest dregs of society, and it is with the greatest difficulty that the barge is kept in even a fairly clean condition for a short time. Many of the children are suffering from diarrhœal disease, some from marasmus, while others are perfectly healthy. How much real good is done in this way, it is very difficult to say ; there is no doubt an immense amount of suffering among tenement-house children, but whether this is the best and only way to reach and relieve it is another question. It no doubt does real good by giving the children great pleasure, and by making them feel that they are not entirely forgotten by those in better circumstances ; but that it has much effect on infantile mortality I doubt very much. The question of how much evil may come from crowding children together, from contagious diseases, etc., should not be lost sight of. The success that has attended the collection of the relief fund is due in a great measure to the New York press, which has from the very beginning given the enterprise its hearty support.

WEEKLY BULLETIN OF PREVALENT DISEASES.

THE following is a bulletin of the diseases prevalent in Massachusetts during the week ending August 28, 1875, compiled under the authority of the State Board of Health from the returns of physicians representing all sections of the State:—

The returns show an increase in the prevalence of diarrhœal diseases; this accession may be explained partly by the sudden transition from very sultry weather to the cool temperature of the last week. The order of relative prevalence of acute diseases in the State at large is as follows: Diarrhœa, cholera morbus, cholera infantum, dysentery, typhoid fever, rheumatism, scarlatina, whooping-cough, bronchitis, diphtheria, influenza, pneumonia, measles—the prevalence of the last five being scarcely worth mentioning. In the sections, the order is as follows:—

Berkshire: Diarrhœa, dysentery, cholera morbus, cholera infantum.

Valley: Diarrhœa, cholera morbus, cholera infantum, typhoid fever, dysentery. Cases of intermittent fever are reported.

Midland: Cholera morbus, diarrhœa, cholera infantum, dysentery, typhoid fever.

Northeastern: Cholera morbus, diarrhœa, cholera infantum, dysentery; a marked increase in the last disease.

Metropolitan: Diarrhœa, cholera infantum, cholera morbus, dysentery, typhoid fever. The type of the fever is thus far mild; Brighton reports a great contrast with last year in this respect.

Southeastern: Diarrhœa, cholera infantum, dysentery, cholera morbus, typhoid fever.

In the whole State, all the diarrhœal affections, together with typhoid fever, have increased; all the other diseases have declined.

F. W. DRAPER, M. D., Registrar.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING AUGUST 21, 1875.

	Estimated Population.	Total Mortality for the Week.	Annual Death-rate per 1000 during Week.
New York	1,060,000	674	33
Philadelphia	800,000	385	25
Brooklyn	500,000		
Boston	350,000	225	33
Cincinnati	260,000	76	15
Providence	100,700	36	18
Worcester	50,000	28	29
Lowell	50,000	41	43
Cambridge	50,000	24	25
Fall River	45,000	38	44
Lawrence	35,000	15	24
Springfield	33,000	8	13
Lynn	28,000	21	39
Salem	26,000	20	40